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ABSTRACT

The author reports that over long periods of a semester or more, evaluation has repeatedly been shown to increase the intensity of student effort and level of achievement. Evaluative procedures which have been presumed to be punitive seem to be reward-oriented when the scale is perceived in terms of different degrees of success. Other relatively unstudied aspects of the relationships between evaluation and motivation are also discussed. (RC)

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Evaluation and Motivation: A Critical Analysis

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Educational Testing Service

Evaluation is the process of critical appraisal through which the worth or merit of a product or performance is estimated. It is essential in learning because without it progress or lack of progress cannot be determined, and learning, by definition, requires progress. Grades are not required for learning; they are only a convenient record-keeping device.

When I take a skiing lesson the instructor watches what I do, picks out the most critical flaw in what I've done, and tells me how to change what I've been doing to improve my performance. This process is reasonably constant whether I'm a novice or an expert, and it is an effective instructional process that requires continual evaluation. Nowhere does a grade appear in the process, and if the instructor were to tell me at some point that a run I had just made was worth a B, that statement would give me no information that would help me learn. The point of this example is to illustrate the important distinction between evaluation and grading, as the two terms are often used. Failure to make that distinction is a source of much confusion and pointless debate.

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Motivation, the second term in my topic, is also a slippery one that almost got away some years ago when George Kelly, writing a chapter in a book on motivation, said there is no such thing (Kelly, 1958, pp. 33-64). Banishing the construct in its entirety is an appealing idea, but some useful conceptual work would then be left undone and Nebraska's psychologists would have to find some other reason to bring a group of leading psychologists annually to Lincoln. For our purposes, motivation is a presumed internal state that helps determine the direction and intensity of a person's actions. In the context of the evaluation of students, the relationships among evaluation, motivation, and grading can be seen in the diagram on the screen.

The dominant concern of educators is to improve the performance of students in some area of activity, a result that may be labeled with any of the four terms on the right. The dominant arrow in the figure is the one showing evaluation to have an effect on performance. As in the example of the ski lesson, performance not only is affected by evaluation; it cannot improve without it. Any performance that is not evaluated cannot improve because no mechanism then exists to distinguish desired from undesired changes in the performance, and any changes that occur will be random fluctuations. The evaluation may be either by the performer or by an observer who informs the performer about the quality of the performance.

We use external observers when we think their evaluations will be more authoritative than the performer's own or when they are to direct further learning activities. This is one reason I pay ski instructors to improve my skiing instead of learning by simply skiing, a procedure that works but not as effectively as formal instruction.

The other arrow that has some importance and is the one most pertinent to this symposium is the arrow from motivation to the arrow connecting evaluation and achievement. The most useful function motivation as a theoretical construct can perform, and the reason I have not accepted George Kelly's invitation to throw the word away, is to help us understand how various elements of a situation, such as evaluation, but including cultural, social, and psychological elements as well, affect performance, and what circumstances may alter those effects. The wide variation in the relationship between evaluation and later performance--that is, variation in the primary arrow of the diagram--is usually attributed to variation in motivation. Whether interest, effort, and performance increase or decline after a favorable evaluation, for example, is attributed to motivation.

Evaluation has repeatedly been shown to affect motivation in the sense that students will increase their effort on a task on which they expect to be evaluated at the expense of tasks they think will not be evaluated. The complexities of this relationship between evaluation and motivation have not been well explored. Does the effect result from the students' desire for information or from their desire for rewards or aversion to punishment? What determines the relative effect on self-esteem, and therefore the rewarding or punitive effect of evaluation, of public compared with private knowledge of performance?

One of the values of diagrams such as this one is to suggest alternative explanations for observed behavior. A widely observed phenomenon in recent years has been the tendency of students to commit more effort and perform better on examinations in courses in which several categories of grades are assigned at the expense of courses graded only Pass-Fail or Pass-No Credit. This effect is designated by the arrow from "Grading" to "Performance," since the students' increased effort has been attributed to the form of the grading system. But insufficient attention has been given to the possibility that the students put their effort into learning material on which they were to be tested, or evaluated, whether or not a grade was to follow, and that graded courses may have included more extensive evaluation. In colleges and programs where grades are not given, the evaluation process still produces anxiety, efforts to perform well, and the direction of effort toward the material to be evaluated (Becker, Geer, & Hughes, 1968). Whether grades add to that effect or not has not been determined. The observed results of comparisons of grading systems may be attributed to the evaluation-performance relationship or to that relationship mediated by motivation.

Most studies of grading are concerned with effects that extend over a few weeks or at most a semester. Yet the effects of evaluation--or possibly grading, though evaluation seems the more plausible operator--do extend over several years. James Davis (1963) and Werts and Watley (1968) have shown the grades college students get affect their decisions about fields of study, graduate schools, and occupations, decisions that can be presumed to have long-lasting implications. Whether students are evaluated and graded in relation to a highly competent, select student body or in relation to a

representative, undistinguished student body influences major decisions about their future activities.

This observation suggests that criterion-referenced evaluation may have different effects than norm-referenced evaluation. The nature of the information provided differs to some extent in criterion as opposed to norm-referenced measurement or evaluation. That difference in the information each type of measurement provides is the critical distinction between them and may affect performance either directly or through an effect on motivation.

Evaluation--the critical appraisal of the merit of a performance--can be. and usually is, followed by one or both of two distinct processes. It can be followed by the transmission of information about the quality of the performance to the performer, which is probably the most effective way the results of an evaluation can be used. Or it can be followed by some form of reward or punishment. Conceptually, information transmission and the disbursing of rewards or punishments are quite distinct. In practice they often merge, as when people become dejected and feel punished on learning that their performance was inadequate in some way, or when punishment (or reward) informs a performer that something was not (or was) acceptable. One of the undesirable consequences of our system of grading is its contamination of the informational use of evaluation with a reward-and-punishment component.

Evaluation and motivation both affect behavior in terms of direction as well as intensity of effort. The informational function of evaluation may have its effect primarily with respect to direction of effort, pointing out areas of weakness in the student's performance. The reward-punishment component of evaluation may largely affect intensity of effort, even though the direction of the effect is not uniformly predictable.

I have neglected two of the arrows of the diagram, one representing the motivation-performance relationship and the other the evaluation-grading relationship. Neither is important. In a sense that is fairly simplistic, but not simplistic enough to prevent studies that demonstrate it from being carried out and reported in respectable journals, motivation affects behavior or performance directly. To say that motivation affects performance is to say that people who want to perform well perform better than people who don't care, other things being equal. This is not a notable discovery of social science; it only points out that any particular type or instance of behavior is embedded within a world of other behaviors that may require the desired performance regardless of what a teacher or anyone else may do, or may so overwhelm the desired performance that it has no chance whatsoever of occurring. Wanting to behave in a certain way is an internal state resulting from a large number of prior experiences and current circumstances. Your presence in this room isn't explained very well by pointing out that your motivation for hearing several people talk about evaluation and motivation was greater than that of someone who is someplace else in the building, or was greater than your motivation to be someplace else. That explanation is too simplistic to be useful. The antecedent or contributory conditions that affect the desire to behave in a certain way are needed for any explanation to be adequate. Motivation is a concept that serves as a convenient staging area where a variety of contributory conditions are marshalled before determining their collective effect on performance.

That evaluation is a necessary preliminary to grading is obvious and worth no more mention that to point out the need for the grading process to communicate and record accurately the attributes or elements of performance to which the evaluation applies as well as the level of performance observed.

My preference, as indicated in the diagram, is to urge major attention to the direct relationship between evaluation and performance. How can the informational function of evaluation be most effectively incorporated into instruction? If the informational function is given precedence over the reward-punishment function, instruction may be improved. At present, evaluation as information, except as it has motivational consequences, is largely ignored by researchers.

Motivation continues to be the focus of a great deal of productive research, largely as a conceptual organizer, collecting a variety of conceptual threads that ultimately affect performance. Grading has also received a substantial amount of thought, study, and resources but without very useful results. We know with reasonable confidence, for example, that where Pass-Fail grading and letter grading exist together, students put more effort into letter-graded courses, and that students don't use a Pass-Fail option to take courses they would otherwise avoid. But little other new knowledge about grading has been produced in the last ten years, and the process, unlike evaluation, does not justify much further study.

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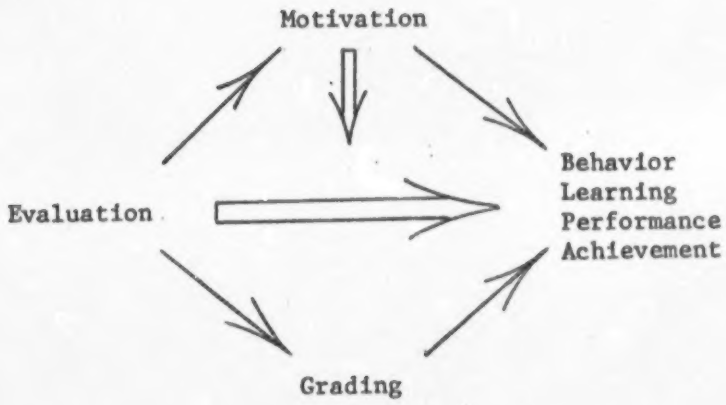
Motivation
Behavior
Learning
Performance
Achievement
Evaluation
Grading